

first material and being combined on a second side opposite said first side with a soft layer made of a softer material than said first material, said patterned layer being stretched to selectively compensate thermal, chemical, and/or mechanical induced deformation of said patterned layer to result in accurate prints; and

said carrier layer describes an x-y-plane in which said carrier layer is rigid and said carrier layer is flexible in a direction perpendicular to said x-y-plane.--

2. (Twice amended) Stamp device for printing a pattern on a surface of a substrate comprising:

a two-sided rigid carrier layer providing on a first side thereof a patterned layer made of a first material and a contact means having at least one soft layer made of softer material than said first material for contacting a second side off said carrier layer, said patterned layer being stretched to selectively compensate thermal, chemical, and/or mechanical induced deformation of said patterned layer to result in accurate prints; and

said carrier layer describes an x-y-plane in which said carrier layer is rigid and said carrier layer is flexible in a direction perpendicular to said x-y-plane.--

9. (Amended) Stamp device according to claim 8, wherein said press means is a roller element comprising a cylindrical press having at least partially a cylindrical surface.

10. (Amended) Stamp device according to claim 2, wherein said contact means is a roller element comprising a cylindrical press element having a least partially a cylindrical surface.

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11. (Amended) Stamp device according to claim 1, wherein said patterned layer provides at least one force transducer zone arranged proximate the margin of said patterned layer for monitoring a force induced load acting between said stamp and said substrate.

12. (Amended) Stamp device according to claim 11, wherein said force transducer zone provides a patterned structure surrounding at least an area free of structures and proximate said area free of structures there are provided structures which bounds the area free of structures in at least one direction.

13. (Amended) Stamp device according to claim 11, wherein said force transducer zone provides a patterned structure surrounding at least an area free of structures; and linear structures are provided which divide said area free of structures in at least two sections.

14. (Twice amended) Stamp device for printing a pattern on a surface of a substrate having a two-sided rigid carrier layer providing on a first side thereof a patterned layer made of a first material and being combined on a second side opposite said first side with a soft layer made of a softer material than said first material,

wherein said patterned layer provides at least one force transducer zone extending along the margins thereof for monitoring a force induced load acting between said stamp and said substrate,

said force transducer zone provides a patterned structure surrounding at least an area free of structures; and includes linear structures which divide said area free of structures into at least two sections,

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wherein at least two said linear structures are arranged to extend perpendicular to each other and dividing said area free of structures into at least into three sections.

15. (Twice amended) Stamp device for printing a pattern on a surface of a substrate having a two-sided rigid carrier layer providing on a first side thereof a patterned layer made of a first material and being combined on a second side opposite said first side with a soft layer made of a softer material than said first material,

said patterned layer providing at least one force transducer zone for monitoring a force induced load acting between said stamp and said substrate,

said force transducer zone is placed in an area near an edge of said patterned layer.

16. (Amended) Stamp device according to claim 1, wherein said patterned layer provides patterned structures for printing said surface of said substrate, said patterned structures being separated from each other by areas free of structures; and support structures in the form of posts or lines, are provided for preventing said areas free of structures from sagging and contacting said substrate by applying a load onto said stamp device.

21. (Amended) Stamp device according to claim 19, wherein at least two layers of said fluidic or gas network are stacked on top of each other to allow formation of multidimensional networks providing access to a multitude of substances at a multitude of locations without level intersections.

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22. (Amended) Stamp device according to claim 1, wherein said patterned layer and the surface of said substrate comprises self-aligning means providing for an accurate relative positioning during the printing process.

23. (Amended) Stamp device according to claim 22, wherein said self-aligning means comprises lock and key elements with lock elements of a constant shape and distance and said key elements being of variable shape smaller than said lock elements and increasingly larger for fitting without any mismatch into said lock elements.

24. (Amended) Stamp device according to claim 23, wherein said lock and key elements have tapered flanks.

25. (Amended) Stamp device according to claim 23, wherein said lock and key elements are arranged in a row along which said patterned layer and said substrate are brought into contact.

B4

27. (Amended) Stamp device according to claim 22, wherein aid key elements are made from the same material as the hard support posts.

29. (Amended) Stamp device according to claim 1, wherein said first material of said patterned layer has a thermal expansion coefficient which is greater than the thermal expansion coefficient of said rigid carrier layer.

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